

### **REMARKS**

In the Office Action mailed March 29, 2004, the Examiner rejected Claims 1-66. The foregoing amendment amends Claims 1, 5, 8, 10, 16, 18, 24, 26, 32, 34-36, 38, 41-46, 49-54, 57-62 and 65-66, cancels Claims 4, 6, 7, 14, 15, 22, 23, 30, 31, 37, 39, 40, 47, 48, 55, 56, 63, and 64 and adds Claims 67-81.

#### **The Specification Provides an Adequate Written Description**

The Examiner objected to the specification and rejected Claims 1-66 under 35 U.S.C. § 112, first paragraph alleging that the details of how to assign a cost to each of the routes was not taught. The cost function is fully described in the specification. The section entitled "Cost Function" beginning on page 30 describes how the cost function is calculated for each path and how the cost function is calculated for a routing matrix or table. The exemplary cost function described in the specification uses latency, headroom and price as terms. The cost of the routing matrix is determined using cost terms that are based on path terms. The specification describes that the latency term for the matrix, Latency(R), is based upon the amount of traffic that is being sent to prefix j from AS i and the latency expected when reaching prefix j from AS i, using the next-hop AS. Page 30, line 15- Page 31, line 1. Exemplary methods for measuring latency and packet loss are described in the section entitled "Performance Monitoring" beginning on page 13 and exemplary methods for inferring performance characteristics are described in the section entitled "Performance Inference" beginning on page 16. The specification describes the headroom and price terms on pages 31 and 32.

### **The Claims are Definite**

The Examiner rejected Claims 1-66 under 35 U.S.C. § 112, second paragraph alleging that the claims are indefinite. In particular, the Examiner alleged that Claims 34-66 were indefinite due to the use of the claim language “programming associated . . .”. The foregoing amendment amends those claims to recite a “computer-readable medium having computer-executable instructions for . . .”. Thus, the amended claims recite functional descriptive material that is structurally and functionally interrelated to a computer-readable medium.

The Examiner also alleged that Claims 8, 16, 24, 32, 41, 49, 57 and 65 were indefinite. The foregoing amendment amends these claims to correct a typographical error so that the claims are now definite.

### **The Claimed Invention is Patentable Over *Mann* and *Kaplan***

The Examiner rejected Claims 1-66 primarily relying upon U.S. Patent No. 6,314,093 to *Mann* et al. (“*Mann*”) and U.S. Patent No. 6,016,307 to *Kaplan* et al (“*Kaplan*”). The Examiner indicated that Claims 7, 15, 23, 31, 40, 48, 56, and 65 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph and to include all the limitations of the base claim and any intervening claims.

Independent Claims 1, 10, 18, 26, 34, 43, 51 and 59 have been amended to include features that the Examiner indicated would place the claims in condition for allowance.

New Claims 67- 81 recite elements that are not taught or suggested by *Mann*, *Kaplan* or a combination of *Mann* and *Kaplan*. The cited sections of *Mann* describe a router that

identifies paths between a source node and a destination node. The router assigns a cost to each link in the path and calculates the cost of the path as the sum of the costs of each link. Column 17, lines 27-30. The user can specify the cost of the links so that the costs may be uniform throughout the network or variable across the links. Although the link cost may vary based on the type of traffic, i.e. voice or data, all costs are predetermined. The costs are not based on path measurements. Column 9, line 63 – Column 10, line 4. Thus, *Mann* does not describe measuring path characteristics or obtaining performance data, as recited by independent Claims 67 and 75. Moreover, *Mann* does not describe weighting multiple path characteristics to determine a path cost, as recited by Claim 67. Although *Mann* describes that a link can have multiple costs, the different costs are associated with different types of traffic so that only one cost is used at a time. Column 18, lines 20-26. *Mann* does not describe the use of subnets, as recited by independent Claims 67, 75 and 81. The dependent claims further define the subnet source as an Autonomous System and the destination subnet as an address prefix. In contrast, *Mann* only describes the analysis of point-to-point routes.

The cited sections of *Kaplan* describe a routing optimization method that is applied to each path. The routing optimization method uses a calculation, \$finalvalue(i), to determine the cost of a path and then selects the path having the highest value of \$finalvalue(i) that is available, operational and meets a threshold value. Column 5, lines 47-64. The calculation uses predetermined and measured values. Column 4, lines 15-65. *Kaplan* does not describe that the route optimization routine uses inferred values, as recited by independent Claim 67. In addition, *Kaplan* does not describe the use of subnets in describing routes, as recited by independent Claims 67, 75 and 81. *Kaplan* only describes the analysis of point-to-point

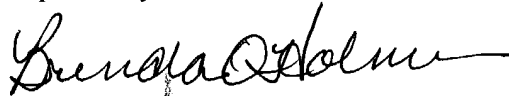
Appl. No. 09/644,221  
Amdt dated 06/23/2004  
Reply to Office Action of 03/29/04

routes. *Kaplan* does not describe optimization based on partitions, as recited by independent Claim 75. Claim 75 recites optimization by source subnet, as well as by destination subnet. In contrast *Kaplan* only describes optimization by specific path.

### CONCLUSION

It is believed that the foregoing amendments place the application in condition for allowance and a notice of allowance is respectfully requested. If there are any issues that can be resolved via a telephone conference, the Examiner is invited to contact the undersigned at 404-685-6799.

Respectfully submitted,



Brenda O. Holmes  
Reg. No. 40,336  
Attorney for Applicant's Assignee

KILPATRICK STOCKTON LLP  
1100 Peachtree Street, Suite 2800  
Atlanta, Georgia 30309-4530  
Receptionist (404) 815-6500  
Direct (404) 685 6799  
Fax (404) 541 3244